

**ANNUAL ADMINISTRATIVE REPORT (FY2000-2001) AND
WORK PLAN (FY 2002) FOR INVENTORIES AND VITAL SIGNS
MONITORING**

FY2000-FY2002

MID-ATLANTIC NETWORK

Shenandoah NP (SHEN)
Booker T. Washington NHS (BOWA)
Richmond National Battlefield Park (RICH)
Appomattox Court House NHS (APCO)
Petersburg National Battlefield Park (PETE)
Fredericksburg and Spotsylvania NMP (FRSP)
Gettysburg National Military Park (GETT)
Eisenhower National Historic Site (EISE)
Hopewell Furnace National NHS HOFU)
Valley Forge National Historical Park (VAFO)
Appalachian National Scenic Trail (APPA)

Mid-Atlantic Network Approval Signatures

John Karish
Chief Scientist, PHSO

Date

Elizabeth Johnson
Inventory and Monitoring Coordinator, Northeast Region

Date

I. Overview and Objectives

The Mid-Atlantic Network (MAN) includes eleven national parks with significant natural resources. Ten of the parks are located in Virginia and Pennsylvania, the eleventh park, the Appalachian Trail covers 14 states. In FY00 and FY01, the Mid-Atlantic Network received funds from the Servicewide I&M program to begin to develop plans to inventory vertebrate and vascular plants in the network parks. With this funding, personnel were hired to compile and enter data from the Network parks into the three I&M program databases developed by WASO; NRBIB, NPSpecies and the Dataset Catalog. NPSpecies was developed to manage park species data, the Dataset Catalog was developed to maintain metadata on park spatial and nonspatial data sets, and the NRBib was developed to store natural resource bibliographic information for each park. The PA parks in this network were fortunate to have received substantial funding prior to establishing networks. These ongoing studies have been brought into compliance with the new guidelines. Several meetings were held with cooperators and resource managers from these parks to review ongoing inventories and discuss I&M guidelines. A scoping workshop for the VA Network parks was held with the help of subject matter experts, to identify data gaps, and inventory priorities for these parks. Attending subject matter experts reviewed the park's existing inventory data, estimated its percent completion, and suggested priorities for future surveys. A four-year study plan was submitted October 1, 2001 outlining priority inventory work to be conducted in the network's parks. The Mid-Atlantic Network will not receive start up funding for monitoring until FY04.

Objectives for Biological Inventories

1. Compile and evaluate existing data for each park into NPS databases (all parks).
2. Evaluate existing inventory data and gaps and write 4-year study plan for vertebrate and vascular plant inventories (all parks).
3. Complete the documentation of 90% of vertebrate and vascular plant species in the parks through targeted field investigations.

II. Accomplishments (FY2000-FY2001) and Scheduled Activities (FY2002)

A. Biological Inventories

Objective 1 – Compile and evaluate existing data for each park into NPS databases (all parks).

Task 1.1 – Compile and evaluate existing data on vertebrates and vascular plants and enter them in a consistent format into NPSpecies, NPBib, Database Template and the Dataset Catalog.

FY 2000-2001 Accomplishments:

- (1) A cooperative agreement with Penn State University (PSU) was established to hire a Research Associate to handle data conversion and verification of the Network's NPSpecies database. Project completion-ongoing.
- (2) A cooperative agreement with Penn State University (PSU) was established to hire Research Associates to search 108 museums and institutions for vertebrate and vascular plant voucher specimens collected in the Network parks and enter this information into NPSpecies. Project completed 2000.

- (3) A cooperative agreement was established with Dr. Jay Stauffer of Penn State University (FY99), to conduct a fish voucher search for the Mid-Atlantic parks as well as parks in the Northeast Temperate and Rivers and Mountains Networks. Species lists and distributions maps for each park are being created and data entered into NPSpecies. Project completion-2001.
- (4) FDGC Metadata had been created for existing MAN spatial data sets. Under a cooperative agreement with North Carolina State University (NC State) the following tasks have either been or are being finalized:
 - a) Metadata on spatial data sets have been processed using Blue Angel.
 - b) NC State developed procedures for converting metadata from FDGC standard format to the NPS Dataset Catalog format. The final conversion will be completed in Nov. 2001.

Activities and Products Scheduled FY 2002:

- (1) Penn State University (PSU) cooperative agreement- NPSpecies Research Associate. The continuation of NPSpecies record verification and data entry. Identification of existing large data sets to be entered into relational databases for the Network parks. Project completion 2002
- (2) Compilation of existing Natural Heritage Program data from 14 states for the Appalachian Trail. APPA GIS Technician hired FY01. All existing Natural Heritage data from 14 states is being gathered and entered into the park's GIS. Project completion-2002.
- (3) NRBib update. Cooperative agreement PSU Research Associate Scott Tiffney. All Network parks will be visited and existing bibliographic information gathered and entered into the NRBib database for the Network. Project completion-2002.

Objective 2– Evaluate existing inventory data and gaps and write 4-year study plan for vertebrate and vascular plant inventories (all parks).

Task 2.1 – Scoping Workshops to identify inventory gaps and develop plans for inventory.

FY 2001 Accomplishments:

- (1) April 3, 2001-scoping workshop held at RICH for VA Mid-Atlantic Network parks. Thirty-five people attended including both National and Regional I&M program staff, MAN resource managers, and scientists from outside agencies and Universities. The workshop goal was to identify gaps in vertebrate and vascular plant inventories and to develop a plan for inventories in MAN parks.
- (2) Meetings were held at PSU in Nov. 1999 and Jun 12, 2001 for four of the PA Mid-Atlantic Network parks. These four parks received funding to complete vertebrate and vascular plant inventories through both regional and pre-network I&M funding. Regional I&M Program staff and Cooperators met to discuss these ongoing inventories and review necessary guidelines for compliance with the National I&M program goals and objectives.

Task 2.2 – Write 4-year study plan for biological inventories.

FY 2001 Accomplishments:

- (1) Mid-Atlantic Network resource managers wrote park descriptions for the study plan including significant natural resources, park history, species of special concern, and management issues.
- (2) The Northeast Region I&M Coordinator and a Research Associate hired through a cooperative agreement with the University of Rhode Island compiled information gathered during the Mid-Atlantic Network scoping workshops and requested proposals from cooperators to fill inventory gaps identified during the workshops.
- (3) Mid-Atlantic Network study plan submitted to WASO, October 1, 2001.

Objective 3 – Complete the documentation of 90% of vertebrate and vascular plant species in the parks through targeted field investigations.

Task 3.1 – Mammal survey

Parks involved: FRSP, RICH, BOWA, PETE, APCO

Activities and Products Scheduled FY 2002:

- (1) A proposal was submitted to the Network by Dr. Ron Barry of Frostburg University and Dr. John Pagels of Virginia Commonwealth University to conduct a two-year study to determine the presence, relative abundance, and distribution of small, medium, and large mammal species in selected Mid-Atlantic parks. FY02 funding was requested for this project.

Task 3.2 – Avian surveys

Parks involved: FRSP, RICH, BOWA, PETE, APCO

Activities and Products Scheduled FY 2002:

- (1) A proposal was submitted by Bryan Watts, Ph.D. of the Center for Conservation Biology, College of William and Mary to search for and catalog all verifiable records of birds occurring within park boundaries, develop an expected species list for each park and conduct targeted avian inventories to fill information gaps. FY03 funding was requested for this project.

Task 3.3 – Herp reconnaissance

Parks involved: FRSP, RICH, BOWA, PETE, APCO

Activities and Products Scheduled FY 2002:

- (1) A proposal was submitted by Joseph Mitchell, Ph.D. of the University of Richmond to do herpetological reconnaissance of five Mid-Atlantic Network parks to better determine costs for conducting herp inventories in these parks. Dr. Mitchell will visit each park, evaluate habitat types and wetland acreage from existing maps and hiking survey and evaluate existing herpetological records for each park and develop a full proposal to complete inventories beginning in FY03. FY02 funding was requested for this project.

Task 3.4 – Fish surveys

Parks involved: FRSP, RICH, BOWA, PETE, APCO, SHEN

Activities and Products Scheduled FY 2002:

- (1) Personnel for the Virginia Department of Game and Inland Fisheries (VDGIF) have volunteered to search their wildlife databases for records on fish

collected in these Mid-Atlantic Network parks, identify data gaps for each park and conduct sampling to fill these gaps. SHEN staff offered to take field crews to each of the VA parks at the end of the season for 1-2 weeks of sampling over the next three years to inventory fish. Costs will be for their travel and per diem.

Task 3.5 – Bat Inventories

Parks involved: EISE, GETT, HOFU, VAFO

Activities and Products Scheduled FY 2002:

- (1) A cooperator will be sought to conduct a bat reconnaissance of four Mid-Atlantic Network parks to determine the need and extent of bat inventories in these parks. The parks will be visited by the cooperator to evaluate habitat types and determine the probability of existing bat species. FY03 funding was requested for this project.

III. Staffing

John Karish, Chief Scientist PHSO

Elizabeth Johnson, Northeast Region I&M Coordinator

Sara Stevens, Research Associate, URI

La Donna Francis Sifford, Research Associate, PSU

Scott Tiffney, Research Associate, PSU

Mid-Atlantic Network Biological Inventory Cooperators

Penn State University-Dr. Jay Stauffer

Penn State University-Dr. Richard Yahner

West Chester university of PA-Dr. Harry Tiebout, III

Frostburg State University-Dr. Ron Barry

Virginia Commonwealth University-Dr. John Pagels

College of William and Mary, Center for Conservation Biology-Dr. Bryan Watts

University of Richmond-Dr. Joe Mitchell

North Carolina State University-Dr. Hugh Devine

Association for Biodiversity Inventory

VA Department of Natural Resources (Heritage program)

IV. Public Interest Highlights

V. Reports, Publications and Presentations

Inventory Plans

- Mid-Atlantic Network pre-proposal for biological inventories
- Mid-Atlantic Network inventory study plan for vertebrate and vascular plant species.

Reports

- Mid-Atlantic and Coastal and Barrier Networks VA parks inventory strategy: A report on the scoping workshop for developing biological inventories.

Presentations

- April 3, 2001. Mid-Atlantic and Coastal and Barrier Network VA Parks Scoping Workshop. RICH.
- Nov. 1999. Introduction to the Inventory and Monitoring Program. Penn State University..
- June 12, 2001. The Inventory and Monitoring Program: Current Initiatives. Penn State University.

VI. Status of Park Vital Signs Monitoring

Planning and implementation of vital signs monitoring has not begun. The Network is due to receive start-up funding in FY04.

VII. Budget Narrative

In FY2000 the Network requested \$65,000 from the NPS Servicewide I&M program for biological inventories. In FY00-01, \$55,582 of this funding was allocated to hiring two research associates at PSU to work on the Network's NPSpecies and NRBib databases and to hiring a research associate at URI to data mine, organize the scoping workshops and write the inventory study plan. This funding was also allocated to NC State to enter all existing Network spatial data sets into the Dataset Catalog, as well as to SHEN for NPSpecies record verification and clean up and to holding a scoping workshops and meetings.

In FY2002, the Network has requested \$74,931 from the NPS Servicewide I&M Program to conduct biological inventories in the Mid-Atlantic Network parks. These funds will be used to initiate mammal inventories and a herpetological reconnaissance survey in the VA parks. Herpetological species and habitat reconnaissance, to be conducted by Joe Mitchell from the University of Richmond, will help better determine the need and extent of a complete herpetological inventory in the parks. Once this is complete Dr. Mitchell will submit a full proposal to the Network in FY03 based upon the results of his initial survey.

Although part of the Mid-Atlantic Network for planning purposes, the Appalachian Trail has been allocated \$200,000 of I&M funds for biological inventories separate from the Network funding. In FY02 \$10,000 has been requested to complete data mining for the park. Once this project is complete, priorities for inventories will be determined based on the quality and quantity of existing information for each taxa. A cartographic technician will also gather Natural Heritage data from 14 states that have been gathered along the trail since the early 1990's. This information will then be entered in the park's NPSpecies database as well as their GIS.

Mid-Atlantic Network FY 2000 Income and Expenditures	NPS-WASO Inventory \$\$	Vital signs Monitoring \$\$	Waso Water Quality \$\$	Park Base & Other Park \$\$	Partners & Other Agencies	In Kind Services
Funding Sources						
Servicewide I&M Program	65,000					
Servicewide I&M Program (Pre-Network Funding)	174,500					
Servicewide I&M Program-Regional Coordinator	21,250					
PrimeNet	78,000					
Park Planning Funds				20,000		
Total Income	338,750			20,000		
FY00 Expenditures						
Personnel (Salary and benefits)						
▪ Regional I&M Coordinator	21,250					
Contracts and Cooperative Agreements						
▪ Penn State University (Research Assoc.-NRBIB)	11,250					
▪ University of RI (Research Assoc.-Regional I&M)	10,690					
▪ North Carolina State University (Dataset Catalog)	2,000					
▪ North Carolina State University (APCO Veg Map)				20,000		
▪ Univ. of Richmond (SHEN Herp Inventory)	78,000					
▪ Penn State University (GETT, EISE, HOFU, VAFO-Birds)	174,500					
▪ Science project	41,060					
Total Expenditures	338,750	0	0	20,000	0	0

Mid-Atlantic Network FY01 Income and Expenditures	NPS- WASO Inventory \$\$	Vital signs Monitoring \$\$	Waso Water Quality \$\$	Park Base & Other Park \$\$	Partners & Other Agencies	In Kind Services
Funding Sources						
Servicewide I&M Program (Network Funding)	0					
Servicewide I&M Program (Pre-Network Funding)	21,007					
Servicewide I&M Program (APPA Funding)	40,000					
Servicewide I&M Program-Regional Coordinator	21,250					
NER Regional Funds				15,359		
Fire Program (SHEN 70,000/VA Parks 11,000)				81,000		
Vegetation Mapping Program	109,447					
Fee Demo				35,400 (SHEN)		
Park Base Funds				13,000		
USGS-NRPP					295,000	
USDOD (Fort Lee)					11,500	
Science Funding	41,060					
Total Income	232,764			144,759	306,500	
FY01 Expenditures						
Personnel (Salary and benefits)						
▪ Regional I&M Coordinator	21,250					
▪ SHEN extension of term (NPSpecies)	4,200					
Contracts and Cooperative Agreements						
▪ Penn State University (Research Assoc.-NPSpecies)	10,000					
▪ Penn State University (Research Assoc.-APPA NRBIB)	40,000					
▪ North Carolina State University (Dataset Catalog)	2,000					
▪ Univ. of RI (Research Associate-I&M)	23,642					
▪ Westchester University of PA (HOFU Herps)	20,022					
▪ Kucera Intl. (VA Parks-Veg Mapping Photography)	21,825				11,500	
▪ North Carolina State University (VA Parks –photo mosaic)	21,089					
▪ ABI (Mid-Atlantic VA parks-Vegetation Crosswalk)				15,359		
▪ VADNR (Mid-Atlantic VA parks-Veg Plots)	66,533			14,000		
▪ Park staff (Mid-Atlantic VA parks-Veg Mapping)				10,000		
▪ USGS Lee Town (SHEN Veg Map)					295,000	
▪ ABI (SHEN-Vegetation Crosswalk)				15,000		
▪ VADNR (SHEN-Veg Plots/ Fire-61,400 & Fee Demo 20,400)				81,800		
▪ SHEN Staff				8,600		
Operations and Equipment						
▪ Scoping Workshops (PA and VA)	2,203					
Total Expenditures	232,764	0	0	144,759	306,500	0

Mid-Atlantic Network Proposed FY02 Income and Expenditures	NPS-WASO Inventory \$\$	Vital signs Monitoring \$\$	Waso Water Quality \$\$	Park Base & Other Park \$\$	Partners & Other Agencies	In Kind Services
Funding Sources						
Servicewide I&M Program	74,931					
Servicewide I&M Program (APPA funding)	39,750					
Servicewide I&M Program-Regional Coordinator	21,250					
NER Regional Funds				148,399		
Prime Net						
NRPP (Small parks)				52,000		
USGS-NRPP					100,000	
NRPP-WASO			27,000			
Resource Management						
Park Planning Funds						
Total Income	135,931		27,000	200,399	100,000	
FY02 Expenditures						
Personnel (Salary and benefits)						
▪ Regional I&M Coordinator	21,250					
▪ APPA Cartographic Tech	29,750					
▪ APPA Data Mining	10,000					
Contracts and Cooperative Agreements						
▪ Virginia Commonwealth U (Mammal Inventory)	68,875					
▪ University of Richmond (Herp Recon Survey)	4,774					
▪ ABI (SHEN-Vegetation Classification)				4,184		
▪ GETT-Re-survey vegetation monitoring plots				37,000		
▪ SHEN-Air Quality Monitoring				7,215		
▪ GETT-Assess Status of State RTE plants				45,000		
▪ GETT-Taxonomic assess of invertebrates				55,000		
▪ VADNR (RICH-RTE Species Inventory)				52,000		
▪ SHEN-Acidic impacts on fish			27,000			
▪ SHEN-Assess vegetation Communities					100,000	
▪ FY01 project add on	1,282					
Total Expenditures	135,931	0	0	200,399	100,000	0